

WHAT IS CLAIMED IS:

1. A press-fitting method for press-fitting an inserting member in a receiving member, comprising:

forming an engaging hole in the receiving member;

forming at least one groove in an inner periphery of the receiving member, the inner periphery created by the engaging hole; and

press-fitting the inserting member in the engaging hole while releasing an excess into the groove.

2. The press-fitting method according to claim 1, wherein:

the inserting member and the receiving member are made of copper;

the inserting member has a hardness higher than a hardness of the receiving member; and

the engaging hole forming step is performed by punching.

3. The press-fitting method according to claim 1, wherein:

the groove forming step forms a plurality of grooves in a circumferential direction; and

the grooves are arranged apart from each other in the direction that the engaging hole is formed.

4. The press-fitting method according to claim 3, wherein the grooves are slanted off circumference.

5. The press-fitting method according to claim 1, wherein

the forming step forms a plurality of grooves in the direction that the engaging hole is formed.

6. The press-fitting method according to claim 5, wherein the grooves are arranged apart from each other in the circumferential direction.

7. The press-fitting method according to claim 5, wherein the grooves are slanted in the circumferential direction.

8. The press-fitting method according to claim 1, wherein the groove forming step forms a plurality of grooves so that a root diameter of the receiving member at a bottom of each groove is substantially equal to an outer diameter of the inserting member.

9. A press-fitting method for press-fitting an inserting member in a receiving member, comprising:

punching an engaging hole in the receiving member while creating a hardened inner periphery surface on the receiving member;

roughening the hardened inner periphery surface; and
press-fitting the inserting member in the engaging hole, wherein the inserting member has a hardness higher than a hardness of the receiving member.

10. The press-fitting method according to claim 9, wherein

the inserting member and the receiving member are made of copper.

11. The press-fitting method according to claim 1, wherein:
 - the inserting member is a base of a rectifying element included in an alternate current power generator and used as an electrode; and
 - the receiving member is a radiation plate of the rectifying element.

12. The press-fitting method according to claim 1, wherein the groove forming step forms a groove in a spiral.

13. A rectifying device used for a vehicular alternate current power generator having a stator and a rotor, wherein the rectifying device has a rectifying element for rectifying an alternate current voltage induced in a stator coil of the stator when the rotor is rotated and a radiation plate, wherein:

the radiation plate has an engaging hole that creates an inner periphery of the radiation plate;

the inner periphery of the radiation plate has a plurality of grooves; and

the rectifying element press-fitted in the engaging hole of the radiation plate.

14. A rectifying device included in a vehicular alternate

current power generator having a stator and a rotor, wherein the rectifying device has a rectifying element that rectifies an alternate current voltage induced in a stator coil of the stator when the rotor is rotated and a radiation plate, characterized in that:

the radiation plate has an engaging hole that creates a hardened inner periphery of the radiation plate;

the hardened inner periphery of the radiation plate is roughened; and

the rectifying element is press-fitted in the engaging hole of the radiation plate.

15. A press-fitting method for press-fitting an inserting member in a receiving member, comprising:

punching an engaging hole in the receiving member while forming a sheared surface and a fractured surface on an inner periphery of the receiving member, the inner periphery created by the hole;

forming at least one groove in the inner periphery; and

press-fitting the inserting member in the receiving member by inserting the inserting member from an end of the receiving member adjacent to the sheared surface.